

"The section involves a series of shales, sandstones, and at least one conglomerate. Some quartz porphyry is present, but not in contact with the worked shale deposits.

"The entire series appears to dip southwest at an angle of about  $15^{\circ}$  to  $20^{\circ}$  and the shales range from those of a highly refractory character to others of much lower refractoriness. On this account some of the shales burn buff, and others red.

"At the base of the section, there appear to be at least two beds of fireclay, the lowest one divisible in some places into three parts. Of these the lowest bench is called a china-clay, and is said to burn white, but our tests show that it does not. The middle and upper bench are separated by a seam of coal, of variable thickness and containing flint clay partings. Some of the best fireclay in the mine has a fusing point of cone 32.

"These shales are said to be adapted to the manufacture of pressed, paving, and firebrick, and sewerpipe.

"Pleistocene clays are found on the lower slopes of the mountain, and can be used for common brick.

"There is now a factory in operation at Clayburn, that of the Clayburn Brick Company. A narrow gauge road has been laid for a distance of 3 miles up a gulch in Sumas mountain, and the total rise in this distance is 450 feet. The mines belonging to the Company are located along the line of this railway.

"Other deposits not yet developed are found on the opposite side of the mountain, but these will probably be opened up before long.

"Around Vancouver, along the Fraser river, at least as far east as New Westminster, and at Sumas mountain, as well as other points, there are deposits of a bluish grey stratified Pleistocene clay, which usually forms lenticular deposits, surrounded by coarse sand. The clay is of value for common bricks and is worked at New Westminster, Clayburn, Port Haney, etc.

"A glacial clay is employed for common and pressed brick manufacture on Arvil island, in Howe sound. Similar material is also worked on Sidney island, and around Victoria.

"Sewerpipe and fireproofing are made at Victoria from shales obtained near Comox, Vancouver island, and residual fireclay from the northwest end of the same island."

Mr. Keele reported as follows with respect to field investigations in Manitoba:—

"About 20 samples of clays and shales were collected at various worked and unworked localities. The limitations and possibilities of these materials will be fully considered in a report to be issued after the series of tests that are now in progress are completed.

<sup>1</sup> Summary Report of the Geological Survey Branch, Department of Mines, 1910, p. 181.